

HealthierUS School Challenge Whole Grains Resource

This resource has been developed as a guide to whole grains for school food authorities interested in applying for the Silver or Gold awards for the HealthierUS School Challenge. This resource only establishes criteria for the amount of whole grains to be included in grains/breads products served in school meals for the HealthierUS School Challenge.

What Are “Whole Grains”?

The HealthierUS School Challenge **definition of whole grains** is as follows: “Whole grains shall consist of the intact, ground, cracked or flaked grain seed whose principal anatomical components—the starchy endosperm, germ and bran—are present in the same relative proportions as they exist in the intact grain seed.”¹

On February 17, 2006, the Food and Drug Administration (FDA), the Federal agency responsible for protecting the safety and wholesomeness of grain products, published a draft guidance on “Whole Grain Label Statements.” FDA included the following statement in this draft guidance: “Cereal grains that consist of the intact, ground, cracked or flaked caryopsis, whose principal anatomical components—the starchy endosperm, germ and bran—are present in the same relative proportions as they exist in the intact caryopsis—should be considered a whole grain food.” FDA went further in their draft guidance, defining some foods as whole grains and indicating that others were not whole grains. Because this draft guidance was published to solicit comments, the final guidance may be changed from the draft. USDA eagerly awaits the publication of FDA’s final guidance on “Whole Grain Label Statements,” and will modify this resource, as needed, to conform to FDA guidance on whole grains.

Whole Grain Products for the HealthierUS School Challenge:

For the HealthierUS School Challenge, a **whole grain product** is a food/menu item where the primary grain ingredient is a whole grain. A complete definition of what constitutes a whole grain product for the HealthierUS

¹ The HealthierUS School Challenge uses a slightly modified version of the definition adopted in 1999 by the American Association of Cereal Chemists because at the time of this publication, FDA had not established a final definition for whole grains.”

School Challenge is described on pages 6 and 7 of this Resource, under the section entitled “Whole Grain Products to Meet the HealthierUS School Challenge.”

Food Products and Standards of Identity:

Standards of Identity define a given food product by specifying its name, what the food *must* contain, and what the food product *may* contain (the ingredients, proportions, optional ingredients, etc.). Standards of Identity were developed to protect the consumer and promote honesty and fair dealing by establishing the general quality requirements for certain food products.

There are Standards of Identity for only a small number of products. For all other products, the manufacturer does not have to follow prescribed recipes/procedures, but must label the food product with the common or usual name of the food and provide an ingredient statement with the common or usual name of the ingredients listed in descending order of predominance by weight. The problem with this is that, without a definition of what a product should be, the common or usual name of many products and ingredients is open to interpretation by the manufacturer. Consumers can purchase with certainty only those products that have “Standards of Identity.”

Whole Grain Bakery Products with Standards of Identity: The only whole grain bakery products that have Standards of Identity are labeled “whole wheat bread”, “whole wheat rolls”, and “whole wheat buns.” This standard requires that those products must be made from “whole wheat flour, bromated whole wheat flour, or a combination of the two.” Therefore, any product labeled “whole wheat bread”, “whole wheat rolls”, or “whole wheat buns”, must be made *only* from whole wheat flours. Other potential names for these whole wheat bread products are “graham bread”, “entire wheat bread”, “graham rolls”, “entire wheat rolls”, “graham buns”, “entire wheat buns.” (Reference: 21 CFR Part 136.180).

Whole Grain Macaroni Products with Standards of Identity: The only whole grain macaroni products that have Standards of Identity are whole wheat macaroni products, including “whole wheat macaroni”, “whole wheat spaghetti”, and “whole wheat vermicelli.” (21 CFR Part 139.138) The grain in these products must be whole wheat flour, whole durum wheat flour, or both.

Whole Grain Cereal Flours and Related Products with Standards of Identity: The following *ingredients* are whole grain flours/meals according to their Standards of Identity. Whenever any of these specific names are used to

describe a grain product, that grain product must be made from the entire grain kernel, including the bran and germ.

“Cracked wheat” (21 CFR Part 137.190)

“Crushed wheat” (21 CFR Part 137.195)

“Whole wheat flour” (21 CFR Part 137.200)

“Graham flour” (21 CFR Part 137.200)

“Entire wheat flour” (21 CFR Part 137.200)

“Bromated whole wheat flour” (21 CFR Part 137.205)

“Whole durum flour” (21 CFR Part 137.225)

Products That *May* Contain Whole Grains That Do Not Have Standards of Identity:

The following products *may* contain whole grains, but there are no Standards of Identity for the products:

- All other baked products except those listed above (includes specialty breads, rolls, buns, crackers, pita bread, tortillas, cookies, graham crackers)
- All other pasta products except those listed above (includes noodles, spaghetti, macaroni, specialty pasta products)
- Cereal products (hot cereals, cold cereals, cereal bars)

You may determine whether or not any of these products contain whole grains by carefully reviewing the product’s ingredient statement.

Common and Usual Names for Whole Grains:

While there are no Standards for the following, these terms are common or usual names for whole grains:

- The word “whole” listed before a grain, for example, “whole corn”, “whole wheat flour”, “whole rye flour.”
- The words “berries” and “groats” also are used to designate whole grains, for example, “oat groats”, “wheat berries”, “buckwheat groats.”
- “Rolled oats” and “Oatmeal” also designate whole grains.
- Other whole grain products that do not use the word “whole” in their description are “graham flour”, “brown rice”, “brown rice flour”, “wild rice”, “cracked wheat”, “bulgur (cracked wheat)”, “crushed wheat”, “graham flour.”

Confusing Terminology in the Market:

- “Cracked wheat” as an *ingredient* in a grain product has a Standard of Identity and must be a whole grain. However, a *food product* with “Cracked Wheat” as part of its name does not have to be made predominantly from the whole grain. Examples available on the market include “Cracked Wheat Bread” and “Cracked Wheat Rolls” which usually have refined enriched wheat (white) flour (not “whole wheat flour”) as the first listed, or primary, ingredient.
- “Graham flour” as an *ingredient* must be whole grain; and any food products labeled “graham bread”, “graham rolls” or “graham buns” must be made only with whole wheat flour, but “graham crackers” do not have to be predominantly whole grain. Graham crackers are usually made with refined enriched wheat (white) flour as the primary grain ingredient.
- Other potentially misleading terms that usually do not reflect products made predominantly from whole grains include “*whole grain*”, “*contains whole grain*”, “*100% wheat*”, “*made with whole wheat*”, “*multigrain*”, and “*pumpernickel*.”

Names That Indicate Products/Ingredients That Are *Not* Whole Grain:

The following are not whole grains: “flour”, “white flour”, “wheat flour”, “all-purpose flour”, “unbleached flour”, “plain flour”, “bromated flour”, “enriched bromated flour”, “enriched flour”, “enriched unbleached flour”, “instantized flour”, “phosphated flour”, “phosphated white flour”, “self-rising flour”, “self-rising wheat flour”, “enriched self-rising flour”, “bread flour”, “cake flour”, “durum flour”, “grits”, “corn grits”, “hominy grits”, “farina”, “semolina”, “degerminated white corn meal”, “degerminated yellow corn meal”, “enriched rice”, “rice flour”, and “couscous.”

Grain Products that May or May Not Be Whole Grain:

Many people think that barley, bulgur, and specialty grains are always whole grains. However, any of these products may have the bran layer and/or germ partially or fully removed. USDA Commodity Bulgur provided to schools is made from cracked wheat, and is a whole grain. The only way that the purchaser can be sure that other bulgur is whole grain is when the ingredient statement shows the term “whole grain bulgur” or “bulgur (cracked wheat).”

Hulled barley is a whole grain, but “pot” or “Scotch” barley and “pearled” barley are not whole grains because bran has been removed.

The term “stone ground” does not necessarily mean that the product is whole grain (“stone ground” describes the process used for making the flour or meal), although many “stone ground” products are whole grains. Look for the words “stone ground whole corn” or “stone ground whole wheat flour.”

Further Documentation May Be Needed for Products/Ingredients Without a Standard of Identity:

When the grain name (such as “oats” or “rye flour”) is listed in the ingredient statement on the product label, but no descriptor is provided, the SFA must obtain further documentation from the manufacturer. For example, the first listed ingredient in a tortilla is “corn.” The SFA cannot assume that the product is whole corn, but must get a statement from the manufacturer documenting that the ingredient should be listed, for example, as “whole corn, ground.”

Examples of Whole Grains:

Listed below are some of the whole grains that are available in the U.S.:

Whole wheat flour
Graham flour (coarsely ground whole wheat flour)
Cracked wheat, crushed wheat
Wheat berries
Whole oats, oatmeal
Whole corn, whole grain cornmeal
Brown rice, brown rice flour
Wild rice
Whole rye, whole rye flour
Dehulled barley, dehulled barley flour
 whole grain barley, whole grain barley flour
Buckwheat groats/whole buckwheat flour
Bulgur (cracked wheat)
Whole millet, whole millet flour
Whole quinoa, whole quinoa flour
Whole spelt, whole spelt flour
Whole sorghum (milo), whole sorghum flour
Whole triticale, whole triticale flour

Purchasing Whole Grain Products:

Developing Purchasing Specifications (Food Product Descriptions) for Grain Products that Have Standards of Identity:

When the SFA wants to purchase whole grain products that have a Standard of Identity, they should write the specification using the correct product name for the whole grain product. For example, specify “Whole Wheat Bread”, “Whole Wheat Hamburger Buns”, “Whole Wheat Hotdog Buns”, “Whole Wheat Spaghetti”, “Whole Wheat Macaroni”, or “Whole Wheat Vermicelli.”

Many whole wheat bread manufacturers go even further and declare that their product is, for example, “100% Whole Wheat Bread,” even though that terminology is unnecessary. Because of the Standard of Identity, the purchaser need only specify “Whole Wheat Bread.” The same is true for Whole Wheat Rolls or Whole Wheat Buns.

Developing Purchasing Specifications (Food Product Descriptions) for Grain Products That Do Not Have a Standard of Identity:

Other grain products may or may not contain whole grains; and if they contain whole grains, the whole grains may be only a small percentage of the grain ingredients. School food authorities (SFAs) must learn to read ingredient statements to become familiar with products available in the market.

In developing specifications for other grain products (e.g., baked products, pasta products, and cereal products), the SFA should state in the specification that the whole grain flour and/or meal shall be the *primary grain ingredient by weight*. For example, in a specification for a cold cereal product, an SFA might state that “whole grain wheat shall be the primary grain ingredient by weight.” If multiple grain ingredients are used, and if some are whole grain and some are not, the SFA can require that the manufacturer provide a product formulation statement to document the weight of each whole grain as a percentage of the total grain ingredients. When added together, the whole grains would have to be at least 51% by weight of the total grain ingredients for the product to meet HealthierUS School Challenge criteria.

Whole Grain Products to Meet the HealthierUS School Challenge:

For **purchased products** to be counted toward the whole grain requirement for the HealthierUS School Challenge:

- (1) The food product must be whole grain according to a Standard of Identity; *or*
- (2) The ingredient statement on the label of the food product must show a whole grain as the first listed grain ingredient; *or*
- (3) Where the first listed grain ingredient is not identified clearly as a whole grain (for example, the first grain ingredient is listed as “Corn”), documentation must be obtained from the manufacturer that the first listed grain ingredient is a whole grain; *or*
- (4) If the first listed grain ingredient is not whole grain, but other whole grains are listed which, when added together, are at least 51% by weight of the total grains used in the product, documentation must be obtained from the manufacturer; *or*
- (5) If the food product carries the whole-grain health claim on its product label it needs no further documentation regardless of the first listed grain ingredient. The whole-grain health claim is as follows, “Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol, may help reduce the risk of heart disease and certain cancers.” The Food and Drug Administration requires that any food product which carries the whole-grain health claim must by regulation contain 51% or more whole-grain ingredients by weight per reference amount and be low in fat.

For **school-made food products** to be counted toward the whole grain requirement for the HealthierUS School Challenge, the food product must meet one of the following criteria:

- (1) The total grain weight in the food product must be 100% whole grain; *or*
- (2) If only two grain products are used in the preparation of the food product (for example, whole wheat flour and enriched wheat (white) flour), the weight of the whole grain must be at least 51% of the total grain weight; *or*
- (3) If multiple grains are used, then the weight of the whole grains added together must be at least 51% of the total grain weight of the product.

Storage of Whole Grains:

As with all foods, the principles of FIFO (First In, First Out) should be used in the storage of whole grains. Because whole grain ingredients (e.g., whole wheat flour, brown rice) retain the bran and the oil-rich germ components, these items are subject to rancidity when stored in warm food storage areas. To increase the shelf life of whole grains, school programs should store these products in a cool, dry place in air tight containers. If the whole grain products will not be used within a short period of time, they should be stored in the refrigerator or freezer.

Taste-testing of Whole Grain Products:

Because many students have not developed a preference for whole grain products, it is a good idea to conduct student taste tests to select products which will have student appeal. By documenting the taste tests and student preferences, SFAs may develop a list of approved whole grain products for purchase.

Schools just beginning to prepare to meet the HealthierUS School Challenge may need to slowly introduce whole grains, beginning with smaller amounts and gradually increasing the amounts to the level of acceptability with the student population.

Looking at the Whole Product:

Before purchasing new products containing whole grains, it is important for SFAs to look carefully at the whole product, not just the whole grains part. Many companies are beginning to jump on the “whole grains” bandwagon, but they are adding the whole grains to products that are otherwise poor nutritional choices. SFAs must be concerned about adding new products that are high in sugars and/or fat, even if they do contain whole grains. Our objective is to provide nutritious diets to children—diets that contain the benefits of whole grains—but that also contain healthful levels of other dietary components.

Ideas for Incorporating Food Products That Are Predominantly Whole Grains in the Child Nutrition Programs:

Listed below are a number of ways that whole grains can be incorporated into school meals. For schools wanting to go for the Gold or Silver level awards for the HealthierUS School Challenge, the food products must meet the criteria listed under the section entitled, “Whole Grain Products to Meet the HealthierUS School Challenge” on pages 6 and 7 of this Resource.

Whole grain ready-to-eat cereals
Whole grain cooked breakfast cereals
Granola made from whole grains
Whole grain cereal or granola bars
Whole grain pancakes or waffles
Whole grain bagels
Whole grain muffins
Whole wheat breads, rolls or buns
Other whole grain breads, rolls, or buns
Whole grain tortillas, taco shells
Whole grain chips/pretzels
Whole grain pita pockets
Whole grain cornbread
Whole grain crackers
Whole grain cookies
Whole grain side dishes [e.g., brown rice, wild rice, bulgur (cracked wheat), whole grain barley, whole specialty grains]
Whole wheat pasta, such as macaroni, spaghetti, vermicelli
Whole grain noodles
Whole grain salads [bulgur (cracked wheat), whole specialty grains]
Other uses of whole grains (soups, casseroles, combination dishes)
Soba noodles (with whole buckwheat flour as primary ingredient)